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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------|
| 10/002,587 | 10/25/2001 | Masataka Aoshima | 10830-077001 / A36-137206 | 4263 |
| 26211 | 7590 | 04/23/2004 | EXAMINER | |
| FISH & RICHARDSON P.C. 45 ROCKEFELLER PLAZA, SUITE 2800 NEW YORK, NY 10111 | | | TRIMMINGS, JOHN P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2133 | 5 |
| DATE MAILED: 04/23/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

124

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/002,587 | AOSHIMA, MASATAKA | |
| | Examiner | Art Unit | |
| | John P Trimmings | 2133 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-6 are presented for examination.

Priority

The examiner acknowledges the claim of priority under 35 USC 119, dated to 10/27/2000.

Claim Objections

1. Claims 1-3 are objected to because of the following informalities: the words, "adapted to" in each claim is not a clearly limiting phrase, and should be replaced with a more appropriate phrase. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al., U.S. Patent No. 4639919, and in view of Rich, U.S. Patent No. 4876685. Chang et al. teaches a data log acquisition circuit and method related to the circuit, for acquiring a data log in correspondence with a test pattern in a test by using an IC tester (Chang et al. FIG.6 and column 4 lines 41-42), comprising: a number-of-patterns output section adapted to count a number of an executed test pattern and output a count value thereof (FIG.6 104); an identity signal output section adapted to compare one of an address of the test pattern and the count value with a predetermined reference value (FIG.6 122) and output an identity signal when the one of the address and the number of the executed test pattern and the predetermined reference value are data for the same test pattern (FIG.6 122, $X=Y$); an output flag control section adapted to control an output flag on a basis of setting of an operation mode when the identity signal outputted by the identity signal output section is inputted (FIG.6 118 HALT PROGRAM); a write address output section adapted to generate and output a write address of the data log (FIG.6 110); a data log output section adapted to output the data log (FIG.6 98) at a timing adjusted for writing the address of the test pattern as a data log (as a result of column 5 lines 17-22); a storage section adapted to store the data log outputted by the data log output section (FIG.6 102) together with the write address inputted from the address output section (FIG.6 110). Chang et al. however fails to teach generating and outputting a write address of the data log when the output flag is inputted by the output

flag control section. In an analogous art, Rich teaches this feature. An output flag control section (FIG.1 42) provides a write address when the output flag (FIG.1 38 FAILS) is inputted. Rich, in column 1 lines 40-64 provides a summary of advantages to the invention, among them being scanning the fail map after testing to provide failing addresses and data one bit at a time. One with ordinary skill in the art at the time of the invention, motivated as suggested by Rich, would combine the references, and so the claim is rejected.

3. Claims 2-3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al., U.S. Patent No. 4639919, and in view of Rich, U.S. Patent No. 4876685 as applied to Claim 1 and 4 above, and further in view of Nakayama, U.S. Patent No. 6587983.

As per Claims 2 and 5:

Rich also teaches the data log acquisition circuit and method according to claims 1 and 4, further comprising: a number-of-FAIL-signals output section (Rich FIG.1 48) adapted to count and output the number of FAIL signal(s) when the FAIL signal is generated (FIG.1 39). But Rich fails to teach a held data output section. In an analogous art however, Nakayama teaches a held data output section (Nakayama FIG.8 156) adapted to hold the data log (FIG.7 20) and the write address to be stored in the storage section temporarily (FIG.8 154) to output the data log and the write address (FIG.8 SELECTOR to CONTROLLER). And Nakayama, in column 3 lines 55-64 describes an advantage of the invention as being a way to start, stop, and resume a pattern thereby improving test application elapsed time. And one with ordinary skill in the art at the time

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of the invention, motivated as such by Nakayama, would combine the references, and so the claims are rejected.

As per Claims 3 and 6:

Chang et al. further teaches the data log acquisition circuit and method according to claims 2 and 5, wherein the held data output section further includes: a control flag output section (FIG.6 100) adapted to output a control flag when the FAIL signal is generated (FIG.6 98); and a clock signal mask section adapted to output a clock signal masked with the control flag outputted by the control flag output section (FIG.6 96, 1-32 and column 5 lines 17-21), wherein the held data output section holds the data log, and Nakayama holds the write address (Nakayama FIG.8 154 and SELECTOR to CONTROLLER) in synchronism with the clock signal outputted by the clock signal mask section (FIG.5 62). One with ordinary skill in the art at the time of the invention, motivated as indicated previously for Nakayama, would combine the references, and so the claims are rejected.

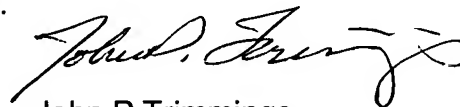
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P Trimmings whose telephone number is 703-305-0714. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

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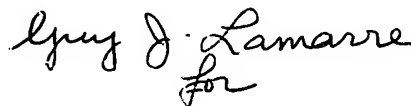
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John P Trimmings
Examiner
Art Unit 2133

jpt



Albert DeCady
Primary Examiner